

ANISIMOV, S.A.; REKSTIN, F.S.; SELEZNEV, K.P.

Study of the efficiency of centrifugal compressor wheels with
two-stage blade lattices. Trudy LPI no.221:32-46 '62.
(MIRA 15:9)

(Compressors)

L 27781655 EWT(1)/EPA/EWP(f)/EWG(v)/T-2/EPA(bb) 2 Pa-5/Pv-1 W
 ACCESSION NR: AT5003391 S/2563/64/000/232/0059/0070

AUTHOR: Anisimov, S. A.; Galerkin, Yu. B.; Rekstin, F. S.; Seleznev, K. P.;
Simonov, A. M.

TITLE: The design of centrifugal compressors ²³

SOURCE: Leningrad. Politekhnikheskiy Institut. Trudy, no. 232, 1964. Turboma-
 shiny (Turbomachines), 59-70

TOPIC TAGS: compressor, centrifugal compressor, compressor design, centrifugal
 compressor parameter, Reynolds number, Mach number

ABSTRACT: The paper discusses modern methods for the design of centrifugal com-
 pressors and proposes a new method based on the utilization of experimentally ob-
 tained criterional parameters of the individual stage elements. Certain deliber-
 ations concerning the optimum design of the basic elements of a centrifugal stage
 based on theoretical and experimental work at the authors' Laboratory are inclu-
 ded. Further tests are now in progress. They should yield better data concern-
 ing the dependence of compressor parameters on the Reynolds and Mach numbers and
 other significant factors, and the mutual influence of these factors. This, in

Card 1/2

L 27781-65

ACCESSION NR: AT5003391

conjunction with the theory outlined in the paper, will result in detailed recommendations concerning the design of all the elements of a stage and of an entire compressor. Orig. art. has: 11 formulas and 2 figures.

ASSOCIATION: Leningradskiy politekhnicheskii institut imeni M. I. Kalinina (Leningrad polytechnical institute)

SUBMITTED: 00

ENCL: 00

SUB CODE: PR

NO REF SOV: 029

OTHER: 000

Card 2/2

I 27783-65 EWT(1)/EPA/ZWP(f)/EWG(v)/T-2/EPA(bb)-2 Pe-5/Pw-4 VW
ACCESSION NR: AT5003393 S/2563/64/000/232/0083/0092

AUTHOR: Rekstin, F. S.; Simonov, A. M.

TITLE: Theoretical and experimental study of centrifugal compressor rotors with an exit angle of 90 degrees

SOURCE: Leningrad. Politekhnicheskii instiut. Trudy, no. 232, 1964. Turbomashiny (Turbomachines), 83-92

TOPIC TAGS: compressor, centrifugal compressor, double deck compressor, compressor efficiency, compressor parameter, vane number, compressor rotor, interblade channel

ABSTRACT: The low efficiency of 90° exit angle compressor rotors is caused by poor flow conditions within the interblade channels as a result of their high diffusiveness. This, in turn, causes break-away effects and high current velocities behind the rotor. Among numerous geometric parameters determining the efficiency of interblade channels, the most important seems to be the opening angle of the equivalent diffuser which is fixed basically by the number of vanes. Tests carried out at the author's laboratory and described in detail in the present article confirmed that the choice of an optimum number of vanes coupled with the use of double

Card 1/2

L 27783-65

ACCESSION NR: AT5003393

2

-deck lattices leads to significant improvements in the aerodynamics of interblade channels. Experimental results agreed very well with the results of the theoretical analysis of the tested rotors. The optimum number of vanes in the single-deck case is within the range of 24-32. The rotors with radial outflow generate a larger thrust than rotors with inclined (backwards) vanes; at the same time, their efficiencies remain comparable. However, their steady operating region is quite narrow. Double-deck lattice rotors with a 90° exit angle simultaneously exhibit an improved efficiency, thrust, and enlarged stability region. The optimum is found at a 24/12-32/16 vane ration. "The work was supervised by Docent K. P. Sel-eznev." Orig. art. has: 9 formulas, 5 figures and 2 tables.

ASSOCIATION: Leningradskiy politekhnicheskii institut imeni M. I. Kalinina (Leningrad polytechnic institute)

SUBMITTED: 00

ENCL: 00

SUB CODE: PR

NO REF SOV: 006

OTHER: 000

Card 2/2

ACCESSION NR: AT4001491

S/2563/63/000/228/0063/0078

AUTHOR: Anisimov, S. A.; Galerkin, Yu. B.; Rekstin, F. S.

TITLE: Investigating low-capacity high-pressure centrifugal compressor stages

SOURCE: Leningrad. Politekhnikheskiy institut. Trudy*, no. 228, 1963, 63-78

TOPIC TAGS: high pressure centrifugal compressor, turbocompressor design, centrifugal compressor stage, compressor characteristic, diffuser characteristic, low capacity centrifugal compressor, centrifugal compressor, turbocompressor, compressor, diffuser

ABSTRACT: In view of the importance to contemporary turbocompressor design of increasing the efficiency of low-capacity, high-pressure, centrifugal compressors, and the difficulties engendered by the small discharge volumes, the authors summarize and evaluate the results obtained in tests of such compressor stages carried out in the compressor department of the Leningradskiy Politekhnikheskiy Institut (Leningrad Polytechnical Institute) in 1959-62. Tests were carried out on 9 configurations of intermediate stages (impeller-diffuser-return bend and channel) and 3 configurations of terminal stages (impeller-diffuser). All the impellers had a relative width b_2/D_2 of approximately 0.02; the intermediate stage impellers had a diameter D_2 of 352 mm and were tested at tip speeds of

Card 1/7
2

ACCESSION NR: AT4001491

300-315 m/sec., while the terminal stage impellers were 220-256 mm in diameter and were tested at 196-229 m/sec. In the impeller vanes, β_2 at the outlet was consistently 90° , while β_1 varied from 18 to 30° . Three types of diffusers (channeled, vaned and vaneless) were used for the intermediate stages, while the terminal stages were tested only with vaned diffusers. The geometrical parameters of the various stages studied are tabulated in detail in the original. The arrangement and flow path for the intermediate and terminal stages tested are shown schematically in Figs. 1 and 2 of the Enclosure. During a test, the authors measured the stagnation pressure, the static pressure and the inlet and outlet temperatures, from which the gas flow and hydraulic efficiency could be calculated. The effectiveness of a particular stage was evaluated on the basis of the stage efficiency, impeller efficiency, diffuser efficiency, stage pressure coefficient, stage pressure ratio, impeller pressure ratio, drag coefficient of the stationary parts, relative loss coefficient of the stagnation pressure, degree of reaction, Mach number, Reynolds number, flow coefficient, discharge rate and the angles of incidence of flow. Some of the results obtained are shown in Table 1 of the Enclosure. On the basis of these results, the authors conclude that further studies are warranted and that higher stage efficiencies can be expected with better matching of the individual components, particularly in the case of stages with vaneless diffusers. Further study of interstage matching is also recommended. Orig. art. has: 30 formulas, 2 tables, 5 graphs and 2

Card 2/3

Leninograd Polytech Inst

L 52090-65 EPR/EWP(k)/EWT(m)/EPA(bb)=2/T=2/EWP(w)/EWP(f)/EWP(v) Pf=4
 ACCESSION NR: AP5015269 EM UR/0286/65/000/009/0050/0050

AUTHORS: Anisimov, S. A.; Galerkin, Yu. B.; Rakstin, F. S.; Seleznev, K. P.; 3 5
Khentalov, V. I. B

TITLE: Blade diffuser for turbines. Class 27, No. 170606

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 9, 1965, 50

TOPIC TAGS: turbine, diffuser, turbine blade 2 4

ABSTRACT: This Author Certificate presents a blade diffuser for turbines of, for instance, a centrifugal or a diagonal compressor, with flaring radial flow ducts in a ring grid (see Fig. 1 on the Enclosure). To broaden the range of the consistent performance of turbines, the grid forms several stages and carries full-length blades. Shorter blades are mounted between the full-length ones at each stage, and the outer edges of all blades lie on a common circumference.

Orig. art. has: 1 figure.

ASSOCIATION: none

SUBMITTED: 29Mar63

ENCL: 01

SUB CODE: IE, PR

NO REF SOV: 000

OTHER: 000

Card 1/2

L-52090-65

ACCESSION NR: AP5015269

ENCLOSURE: 01

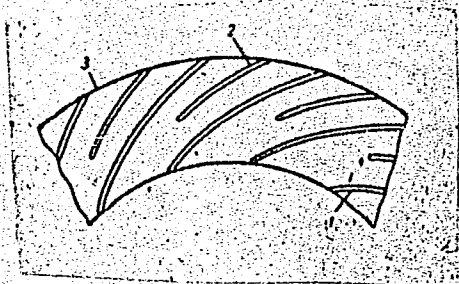


Fig. 1.

1- full-length blades; 2- short blades; 3- common circumference

Card

258
2/2

L 45973-66 EWT(1)/EWT(m)/EWP(k)/T-2/EWP(w)/EWP(f)/EWP(v) IJP(c) WW/EM/GD
 ACC NR: AT6026436 (N) SOURCE CODE: UR/0000/66/000/000/0154/0166

AUTHOR: Seleznev, K. P.; Galerkin, Yu. B.; Anisimov, S. A.; Rekstin, F. S.; Patrin, Yu. V.; Simonov, A. M.; Shkarbul', S. N.

ORG: None

TITLE: Results of an investigation of impellers in centrifugal compressors

SOURCE: Leningrad. Nauchno-issledovatel'skiy i konstruktorskiy institut khimicheskogo mashinostroyeniya. Tsentrobeznyye kompressornyye mashiny (Centrifugal compressors). Moscow, Izd-vo Mashinostroyeniye, 1966, 154-166

TOPIC TAGS: centrifugal compressor, compressor blade, aerodynamic characteristic

ABSTRACT: The authors review the results of experimental and theoretical studies on improving the aerodynamic characteristics of impellers in centrifugal compressors. It is shown that impellers should be designed with a linear change in the cross sectional area with respect to channel length to improve flow characteristics. The number of blades should be selected on the basis of the optimum apex angle for the channels between blades. Experimental investigation of a large number of single-stage impellers with exit angles of 20, 49 and 90° showed that optimum impellers from the standpoint of maximum efficiency have 8-12, 16-18 and 28 or more blades¹ respectively. However, stability is reduced with an increase in the number of blades so that two-

Card 1/2

L 45973-66

ACC NR: AT6026436

stage cascades are preferable for high-efficiency impellers with a large number of blades. Recommendations are made for optimizing the operation parameters of various types of centrifugal compressors on the basis of recent experimental research. Orig. art. has: 6 figures.

SUB CODE: 13/ SUBM DATE: 08Jan66/ ORIG REF: 009/ OTH REF: 003

Card 2/2 hs

ACC NR: AM6019923

Monograph

UR/

Dimentova, Anna Aleksandrovna; Rekstin, Feliks Sergeyevich; Ryabov, Valentin Alekseyevich

Tables of gasodynamic functions ($k = 1.05-1.70$); a handbook (Tablitsy gazodinamicheskikh funktsiy ($k = 1.05-1.70$); spravochnoye posobiye) Moscow, Izd-vo "Mashinostroyeniye," 1966. 135 p. illus., biblio., tables. 5500 copies printed.

TOPIC TAGS: gas dynamics, mathematic table, *function analysis, pipe flow, gas flow*

PURPOSE AND COVERAGE: This reference manual contains tables of the values of the gas-dynamic functions over a wide range of values of the isentropic exponent ($k = 1.05-1.70$), which includes all real gases used at present, for values of the reduced velocity (the ratio of the velocity of the gas to the critical velocity) $\lambda = 0.01-1.8$. The functions tabulated here are: ζ —the ratio of velocities (the velocity of a gas to the maximum discharge velocity); $\pi(\lambda)$ —function of the ratio of pressures; $\tau(\lambda)$ —function of the ratio of temperatures; $\epsilon(\lambda)$ —function of the ratio of densities; $q(\lambda)$ —function of the reduced density of mass flow; $y(\lambda)$ —function of the static impulse of gas flow; $r(\lambda)$ —function of the relative static impulse; $j^*(\lambda)$ —function of the relative velocity head; M —the Mach number; Φ —the ratio of speeds of sound; and $z(\lambda)$ —function of the total reduced impulse. The values of

Card 1/2

UDC: 518.2

ACC NR: AM6019923

these functions were computed on a Ural digital computer. Formulas are given to illustrate the application of the tables in calculating the parameters of flows in pipes and open channels, in elements of ducts in turbines operating on various gases and gas mixtures. This book can be used in designing and studying power turbines and apparatus, and also in different fields of subsonic, sonic, and supersonic aerodynamics. As a reference manual, it is intended for workers in scientific research institutes and design bureaus who are engaged in gas-dynamic calculations and research; it may also be useful to university students studying the corresponding specialties.

TABLE OF CONTENTS [abridged]:

Foreword -- 3
Notation -- 5
Description of the functions and their basic properties -- 7
Transformation of the fundamental equations of gas dynamics by the
gas-dynamic functions -- 17
Tables -- 20
Constants used in the gas-dynamics functions -- 133
Bibliography -- 137

SUB CODE: 20/2/SUBM DATE: 19Jan66/ ORIG REF: 007

Card 2/2

REKSTYN, V.

"Almanac and Characteristics of Air Masses in Winter over Vladivostok," included in a collection of works edited by Prof. S. P. Khromov, "Synoptic Processes of the Far East," Hydrometeorological Publishers, Moscow, 1940

I

REKTOR, L.

Neural and psychical disorders in isonicotinic acid hydrazide therapy. Bratisl. lek. listy 35 no.9:553-561 1955.

1. Z Neuro-psychiatrickeho oddelenia OUNZ v Levoci, predn. MUDr. L. Rektor.

(MENTAL DISORDERS, etiology and pathogenesis,
isoniazid tox.)

(NICOTINIC ACID ISOMERS, injurious effects,
isoniazid causing ment. disord.)

REKTOR L. Stat. obl. nem. v. levoci. Inkarcerojena diafragmaticka hernia ako komplikacia elektrosokovej liecby Incarceration of diaphragmatic hernia following electroschock. Report of a case BRATISLAVSKE LEKARS. LISTY 1951, 31/5-6 (610-613) Illus. 1

So: Excerpta Medica, Section VIII Vol. 5 No. 8

REF ID: A66013
GROSS, Jan; REKTOR, Jan

Controlled hypotension treatment in psychiatry. Cesk. psychiat.
53 no.1:26-31 Feb 57.

1. Neuropsychiatricke oddelenie OUMZ - Okresna nemocnice v Levoci.
(HYPOTENSION CONTROLLED, ther. use
depression & neurasthenia (Cs))
(DEPRESSION, ther.
controlled hypotension (Cs))
(NEURASTHENIA, ther.
same)

REKTOR, Leonard

Contribution to the problem of complications in malarial therapy.
Cesk.psychiat.56 no.6:367-373 D '60.

1. Psychiatricke oddelenie GUNZ v Levoci.
(FEVER THERAPY compl)

REKTOR, Leonard; GROSS, Jan

~~REKTOR, Leonard; GROSS, Jan~~
Treatment of anxiety states with cholinergics. Cesk. psychiat.
53 no.2:101-105 Mar 57.

1. Neuro-psychiatricke oddelenie OUNZ - okr. nemocnice v
Levoci.

(ANXIETY, ther.

acetylcholine (Cz))

(ACETYLCHOLINE, ther. use

anxiety (Cz))

REKTOR, V.; SPICKA, V.

"Some remarks on the use of special gasoline. p. 244."

SVET MOTORU. Praha, Czechoslovakia, Vol. 13, No. 8, April 1959

Monthly List of East European Accessions (EEAI), LC, Vol, 8, No. 6, June 1959
Unclas.

REKTO, V.

"Use of motor oils with additives."

MECHANISACE ZEMEDELSTVI, Praha, Czechoslovakia, Vol. 9, No. 7, July 1959.

Monthly List of East European Accessions (EEAI), LC, Vol. 8, No. 9, September 1959.

Unclassified.

REKTORIK Jiri; BACHMAN, Josef

Problem of television reception on the 4th television band.
Sdel tech 9 no.12:456-457 D '61.

CATEGORY : Chemical Technology. Chemical Products and their Applications. Pharmaceuticals. Vitamins. Antibiotics

ABS. JOUR. : RZhKhim., No 19, 1959, No. 62817

AUTHOR : Doktorik, L.; Vlasek,.; Zafisek, R.

2. Low blood glucose in Diabetic
coma at initiation.

OPIC, PUB. : Czechosl. farmaco., 1952. 7, No 7, 418-419

ABSTRACT : A project involving additions to the Czechoslovakian Pharmacopoeia, 25 issue based on experimental work done by the authors (See Ref. Drug-Abuse, 1968, Vol. 1, 199-2). Detailed description of apparatus and procedure for the determination of the freezing point lowering of solutions. --T. Zvarova.

6453

713

HEKTORIK, Z.;ZAJICEK, R.

Sterilization in the Czechoslovakian Pharmacopeia, 1st Addendum.
Cesk. farm. 2 no.1:25-31 Jan 1953. (CML 25:1)

REKTORIK, Z.; STĚJSKAL, J.

Galenic preparation in the 8th edition of the Soviet Pharmacopeia.
Cesk. farm. 2 no.5:161-164 May 1953. (CML 25:1)

CZECHOSLOVAKIA / Physical Chemistry. Thermodynamics. Thermo-chemistry. Equilibria. Physicochemical Analysis. Phase Transitions. B-8

Abs Jour : Ref Zhur - Khimiya, No 3, 1959, No. 7518

Author : Rektorik, Z.; Rybacek, L.; Zajicek, R.

Inst : Not given

Title : Cryoscopic Data of the Solutions of Boric Acid and Monosubstituted Sodium Phosphate

Orig Pub : Ceskosl. farmac., 1958, 7, No 6, 318-320

Abstract : Determinations were made by means of a deltameter (RZhKhim, 1958, 68445) of cryoscopic data of solutions of H_3BO_3 (I) and $Na_2HPO_4 \cdot 2H_2O$ (II) which differ from those found in the literature. According to results of the experiments the isotonic ($\Delta = 0.520^\circ$) solutions are those containing 1.69% I and 2.33% II. -- According to authors' summary

Card 1/1

REKTORIK, Z.; ZAJICEK, R.

Collyria in the Czechoslovak Pharmacopoea No. 2. Cas. lek.
cesk. 96 no.3:89-91 18 Jan 57.

1. Vyzkumne lekarnicke stredisko v Praze.

(SOLUTIONS

collyria in Czechoslovak Pharmacopoea (Cz))

CZECHOSLOVAKIA / Chemical Technology. Chemical Products. H
Products. Drugs. Vitamins. Antibiotics.

Abs Jour: Ref Zhur-Khimiya, 1958, No 20, 68445.

Author : Rektorik Z., Rybacek L., Zajicek R.

Inst : Not given.

Title : Isotonically-Euhydic Processing of Eye Drops.

Orig Pub: Ceskosl. farmac., 1957, 6, No 9, 503-510.

Abstract: In addition to the chapter entitled "Kollirii" (K)
of the Czechoslovakian pharmacopeia, 2^d edition
(Ph Bs II), a new method of obtaining the isotonic-
ally euhydic K K from hypotonical hydric K has
been developed. The preparations included use of
borate (pH 6.3 and 6.8) and phosphate (pH 5.3, 6.05,
6.45 and 6.85) buffer solutions or 1.9% solution
of boric acid (pH 5) in the isotonic mixtures (Δ =
= 0.520⁰) which was checked experimentally by means

Card 1/2

CZECHOSLOVAKIA/Chemical Technology. Pharmaceuticals.
Vitamins. Antibiotics.

H

Abs Jour: Ref Zhur-Khin., No 24, 1958, 82690.

Author : Zajicek R., Rektorik Z.

Inst :

Title : The Osmotic Equivalence of Diluted Solutions by
Isotonic-Enhydric Treatment.

Orig Pub: Ceskosl. farmac., 1958, 77 No 1, 18-20.

Abstract: Equations were derived for the relationship between the decrease in the freezing point of the solution and its concentration. These equations were compared with those applied up to now and which are based on the concentration of the dissolved substance. By a comparison with the equation for the isotonic sodium chloride solution, a concentration

Card : 1/2

11

REKTORIK, Z.;STEJSKAL, J.

Galenic substances in the 8th edition of the Soviet Pharmacopeia. Cesk.
farm. 1 no.9:518-528 1952. (CLML 23:4)

RIZNIK, A.Ya.

[Electrician in the petroleum industry] Elektromonter neftepromysla. Moskva, Gos.nauchno-tekhn.izd-vo neftianoi i gorno-toplivnoi lit-ry, 1953.
(MLRA 6:7)
212 n. (Petroleum industry--Electric equipment)

REKTORIK, Z.;STEJSKAL, J.

Galenic preparations in the 8th edition of the Soviet Pharmacopeia. III.
Gesk. farm. 2 no.3:90-97 Mar 1953. (CLML 24:4)

REKTORIK, Z.;STEJSKAL, J.

Galenic preparations in the eighth edition of the Soviet Pharmacopeia.
Cesk. farm. 2 no.2:56-60 Feb 1953. (CIML 24:4)

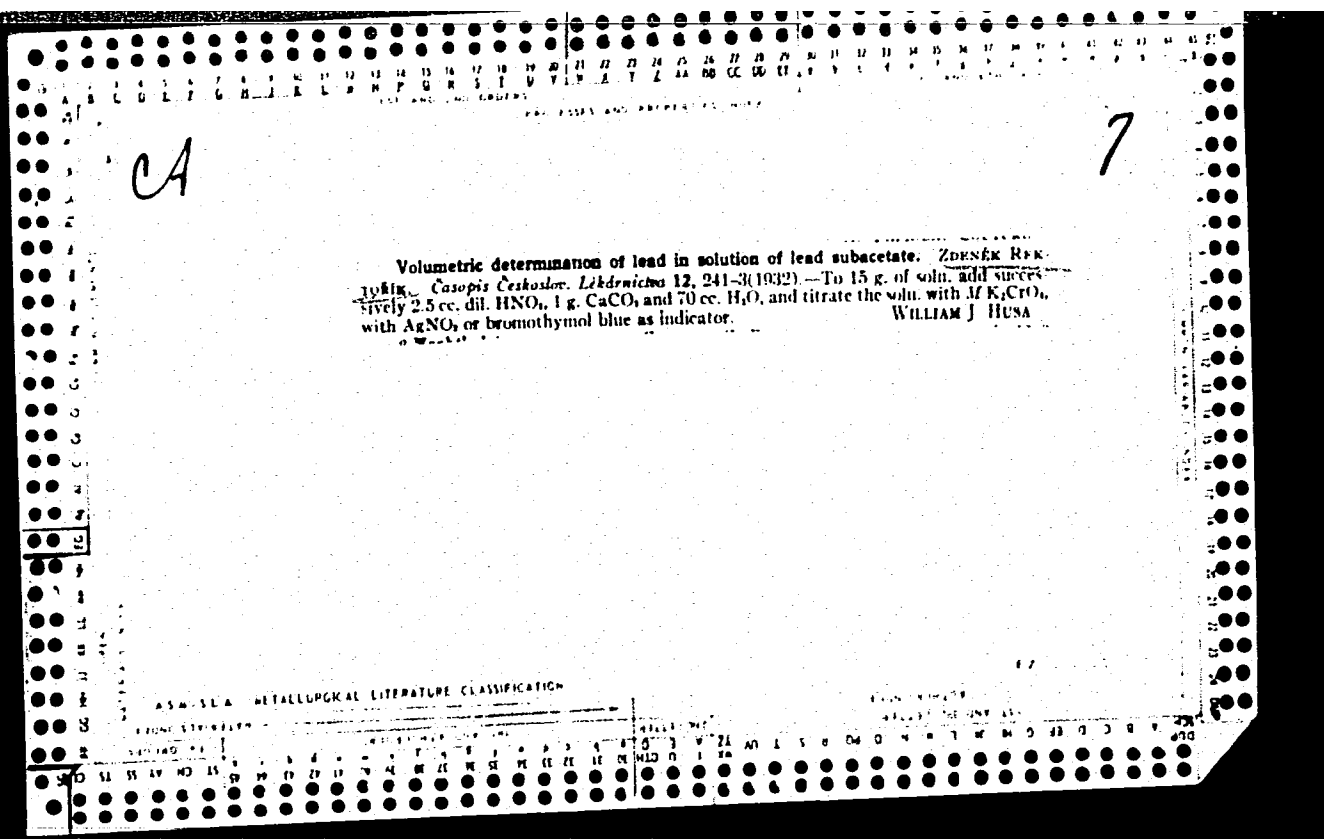
REKTORIK, Z.

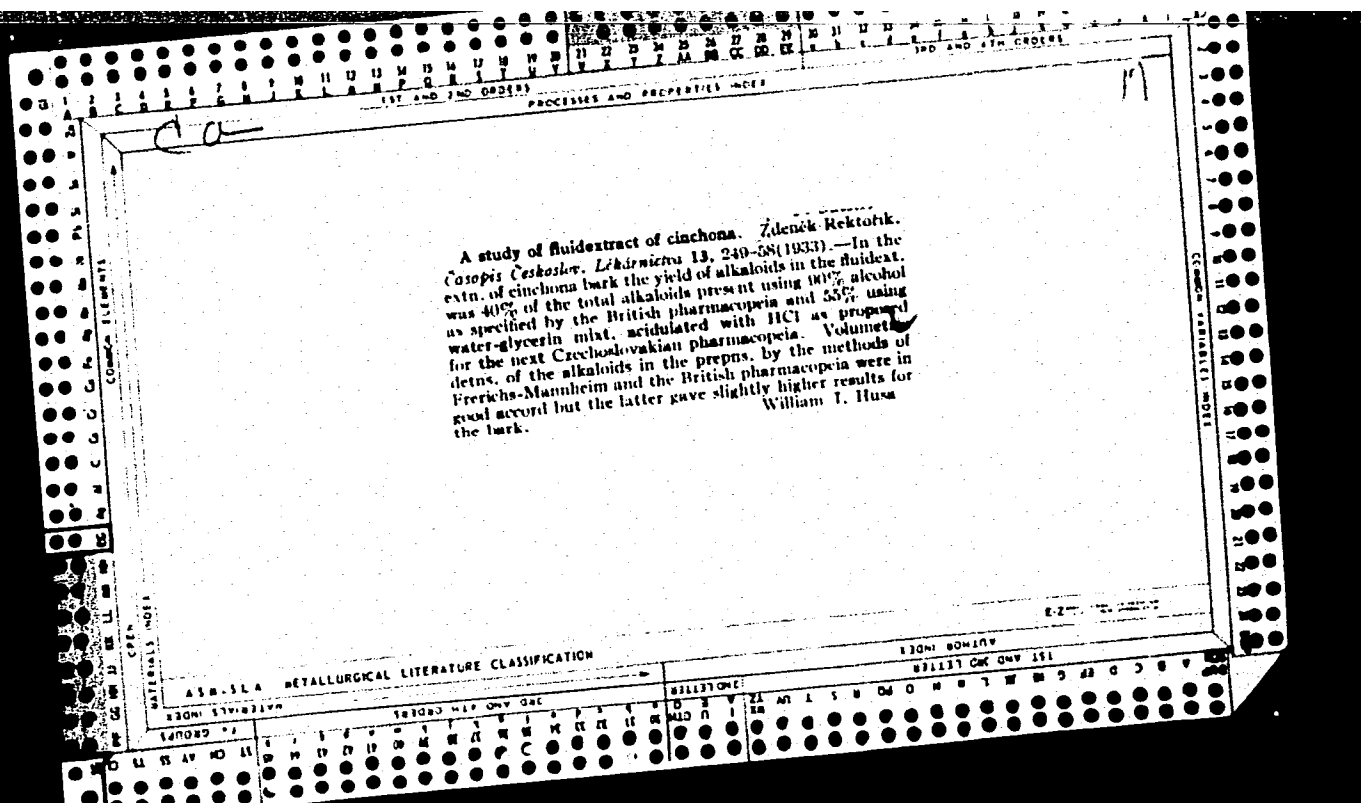
New ointment bases. Cesk. farm. 1 no.8:458-464 Sept 1952. (CLML 23:2)

7

Argentometric determination of nitroprussiate. O. TOMICK AND Z. RUDOLIK.
Collection Czechoslov. Chem. Communications 3, 129 (1968). The ion product $Ag^+ \cdot$
 $[CN(CN)_5] = 7.8 \cdot 10^{-12}$. The concn. of Ag^+ in a soln. satd. with this salt is $2.5 \cdot$
 10^{-6} mols. per l. A soln. of nitroprussiate, therefore, can be titrated potentiometrically,
 with Ag soldered to Pt as comparison electrode, or the Volhard titration can be carried
 out as in the analysis of Cl^- ; an excess of $AgNO_3$ is added and the excess titrated with
 KCNS with ferric alum as indicator. W. T. H.

1ST AND 2ND SERIES										PROCESSING AND PROPERTIES MOOD										3RD AND 4TH SERIES									
<i>Sc</i> <i>U-1</i> Information: determination of antimony. O. Sankhara and S. Sankhara, Czech. Chem. Comm., 1955, 30, 125-126, 1250; also product of $\text{Ag}_2\text{Fe}(\text{ClO}_4)_2$ is 2.6×10^{-4}, i.e., the solubility approximately 10 times of $\text{Ag}_2\text{Fe}(\text{ClO}_4)_2$ may be obtained quantitatively with Ag_2Fe in presence of H_2O_2 or HNO_3; H_2O_2 (in presence of H_2O) is used quantitatively and qualitatively. Detection of $\text{Fe}(\text{ClO}_4)_3$ by Volhard's method is satisfactory, but with Mohr's method the end-point is less clear. H. P. G.																													
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08 17 A study of fluidextract of cinchona. Zdeněk Rektoušek. <i>Časopis Českoslov. Lékařnictva</i> 13, 249-58(1933).--In the extn. of cinchona bark the yield of alkaloids in the fluidext. was 40% of the total alkaloids present using 90% alcohol as specified by the British pharmacopoeia and 55% using water-glycerin mixt. acidulated with HCl as proposed for the next Czechoslovakian pharmacopoeia. Volumetric detns. of the alkaloids in the preps. by the methods of Frerichs-Mannheim and the British pharmacopoeia were in good accord but the latter gave slightly higher results for the bark. William I. Hrusa.																																																			
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17

The determination of morphine in opium and its official preparations. *Zbornik*
Rusko-him.-Otopis Ceskoslov. Lekarnictva 12, 286-12A (1932). The time required for
 detn. of morphine in opium by the method of the Pharm. Neerl. V can be shortened.
 Agitation for 30 min. for opium, 25 min. for the ext. and 10 min. for the tincture suffices,
 the drug and ext. being first triturated for 15 min. with 15 cc. H₂O and 0.35 g. CaO.
 Pptn. on addn. of NH₄Cl is complete in the ext. and tincture in 3 hrs. in the drug in
 8 hrs.
 WILLIAM J. HUBA

ASB-51A METALLURGICAL LITERATURE CLASSIFICATION

COMMON ELEMENTS																									
TEST AND TREATING CODES													PROCESSES AND PROPERTIES INDEX												
CO 17 The determination of alkaloids by silicotungstic acid. ZDENĚK REKTOŘEK. <i>Časopis Českoslov. Lékařnické</i> 11, 2-10, 33-8(1931).—Silicotungstates of morphine and codeine were prepd., the latter contg. 4 mols. of the acid. For the detn. of codeine, the volumetric method of North and Beal (<i>C. A.</i> 19, 792) is better than the gravimetric method; neither method gives very satisfactory results in the detn. of morphine in sirups. WILLIAM J. HUBA																									
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SYNOPSIS													ANALYSIS												
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COUNTRY : Czechoslovakia H-17
 CATEGORY :
 ABS. JOUR. : RZKhim., No. 51960, No. 19051
 AUTHOR : Rektorik, Z., Rybacek, L., Seneš, J., and Zajíček, R.
 INST. : Not given
 TITLE : Eye Drops Containing Zinc Sulfate Prepared According to PhEs II. Their Composition, and Preparation Methods.
 ORIG. PUB. : Ceskoslov Farmac, 7, no 9, 508-511 (1958)
 ABSTRACT : The composition and preparation method for the above-indicated medicinal preparation have been checked from the point of view of possible incompatibility of phenylmercuriborate with NaCl, and the effect of various synthesis aids and of the temperature of the solvent on the hydrolysis of $ZnSO_4$. It is proposed to dissolve $ZnSO_4$ (0.25%) and the synthesis aids (0.5% CH_3COONa and 0.6% NaCl) in a solution of phenylmercuriborate (0.002%) at about 20°. The above procedure eliminates the

CARD: 1/2

COUNTRY : Czechoslovakia H-17
 CATEGORY :
 ABS. JOUR. : RZKhim., No. 51960, No. 19051
 AUTHOR :
 INST. :
 TITLE :
 ORIG. PUB. :
 ABSTRACT : incompatibility of the phenylmercury cation with the Cl^- anion and avoids the use of warm water as indicated in the Czechoslovak Pharmacopoeia II, which increases the hydrolysis of $ZnSO_4$. A more satisfactory formulation for the preparation of eye drops containing $ZnSO_4$ and borate buffer solution (pH 6.3) is given.

From authors' summary

CARD: 2/2

293

REKTORYS, Karel

"Mathematical formulas" by Hans-Jochen Bartsch. Reviewed by
Karel Rektorys. Aplikace mat 9 no.2:155 '64.

ADAMS, Karel

"Tables of indefinite integrals" by M.I. Snoljenskiy. Reviewed
by Karel Rektorys. Pokroky mat fyz astr 9 no.2:126-164

REKTORYS, Karel

Solution of the mixed boundary value problem and of a problem with integral condition for a nonlinear parabolic equation by the relaxation method on the whole. Chekhosl mat zhurnal 13 no.2:189-208 Je '63.

1. Ceske vysoke uceni technicke, Praha 2, Trojanova 13.

REKTORYS, Karel

"A course of advanced mathematics for technical schools" by H.P. Tarasov.
Reviewed by Karel Rektorys. Aplikace mat 7 no.4:324-325 '62.

REKTORYS, Karel

"Mathematics for use in aeronautics and other operations" by
[inz.] Tomas Zeman. Reviewed by Karel Rektorys. Pokroky mat
fyz astr 7 no.6:361-362 '62.

REKTORYS, K.

Rektorys, Karel. Application of Lagrange's equations of the second category to the study of the function of a mechanism. *Apl. Mat.* 1 (1956), 319-333. (Czech. Russian and English summaries)

In the present paper the author studies the motion of a stone on the surface of a rotating cone. The problem is reduced to the approximate solution of Lagrange's equation of motion of the second kind. In particular, the author studies the influence of friction. The analysis is elementary.

²⁶ K. Bhagvandin (Oslo).

Adpo

REYKOVIS, K.

REYKOVIS, K. Determination of the temperature in a solid gravity dam when inner heat sources are considered. p. 1.

Vol. 66, No. 14, 1956.

ROZPRÁVI. ŘADA ATECHNICKO-PRŮMYŠLOVÁ.

SCIENCE

Praha, Czechoslovakia

So: East European Accession, Vol. 6, No. 3, March 1957

REKTORYS, KAREL

✓ ★ Babuška, Ivo; Rektorys, Karel; and Vyčichlo, František.
Matematická teorie rovinné pružnosti. [The mathematical theory of plane elasticity.] Naklad. Českoslov. Akad. Věd, Prague, 1955. 527 pp.

3

Aug The book is devoted to the application of the theory of functions of a complex variable to solving plane problems of the classical mathematical theory of elasticity (for static problems without the effect of body forces). From the mathematical point of view it deals with the special method of solving a biharmonic equation for given boundary conditions. The book gives and further develops some of the results of N. I. Muskhelishvili and collaborators. An original contribution is the axiomatic construction of the fundamentals of plane elasticity, the accuracy and generality of the mathematical procedures and some new numerical methods of solution. However, the book does not exhaust the whole subject; for example, it does not deal with the mixed boundary value problem or estimations of the errors of numerical solutions. The authors plan to deal with these questions and other methods of solving the plane problem of the mathematical theory of elasticity in further volumes.

The whole book is written in a modern mathematical style of the type: definition - theorem - proof, supple-

1/4

BAWKA, Ivo and REKTOREVS, KAREL

mented by brief and comprehensive explanations.

The book is divided into four chapters and a mathematical supplement.

The first chapter is devoted to fundamental concepts. These basic concepts of the plane problem are introduced directly by definition in the plane, not — as is usual in the literature — by specialisation from the spatial problem to plane stress and plane deformation. Thus it directly gives definitions of a plane body, vector and tensor, stress in a plane, deformation etc.; the concept of equilibrium and Hooke's law is also given by definition. The basic concepts are discussed and a derivation given of the fundamental equations for the static case. The authors avoided the procedure usual up to now in the mathematical theory of elasticity, when mathematical and physical considerations alternate. Thus basically they give the axiomatic construction of the fundamentals of plane elasticity.

The second chapter gives the formulation of the problem of plane elasticity. The complex functions of stress are introduced by a procedure similar to that used by Muskhelishvili and their characteristics are studied in simply and multiply connected, limited and infinite bodies. The formulation and proof is given of the unique-

2/4

BABUŠKA, IVO and REKTOREK, KAREL

ness of the solution of the first problem (the components of external stress or that of the principal vector are given on the boundary) and of the second problem of elasticity (the components of displacement given on the boundary).

The third chapter is devoted to methods for solving the problems formulated in the second chapter, by means of complex functions of stress. Only two of the greater number of possible formulations of the problem are dealt with — those using the integral equations of Muskhelishvili and Lauricella-Shermann. Greater attention is paid to the equation of Lauricella-Shermann which is used both for proving the existence and uniqueness of the solution

and for the general solution of the first problem for a circle, half-plane and the exterior of a circle. Their properties are also used for a new formulation of Saint-Venant's principle. Some new numerical methods for solving the problem of plane elasticity are proposed, consisting in a combination of the method of the functions of a complex variable and the method of the minimum of a quadratic functional. This method is used for solving the second boundary value problem for an annulus and for calculating the stress in a crane hook. At the end of the chapter the possibility is shown of transforming the Lauricella-Shermann equation for multiply connected bodies into a system of integral equations and the ad-

3/4

BABUŠKA, Ivo and REKTOVIS, Karel...

vantages of this procedure for numerical calculation is proved.

The fourth chapter gives a solution of the plane problem of elasticity by means of the method of conformal mapping for bodies which can be conformally mapped onto a circle. The corresponding integral equations are given and an approximative solution carried out for a square compressed by two (isolated) point forces.

The mathematical supplement deals briefly with some selected topics of the theory of the functions of a complex variable and also that of integral equations the results of which are used in the preceding chapters.

František Kroupa (Praha).

4/4

of

REKTORYS, KAREL

3

Rektorys, Karel. Two theorems concerning the equation

$\frac{\partial u}{\partial t} = \frac{\partial^2 u}{\partial x^2} + \frac{\partial^2 u}{\partial y^2}$. Casopis Pěst. Mat. 79 (1954), 333-366. (Czech. Russian and English summaries)

The author proves the following two theorems: Theorem I: Let $f(x)$ be a bounded function on $(0, \pi)$ and continuous almost everywhere. Then there exists one and only one function $V(x, y)$ in the rectangle $0 \leq x \leq \pi$, $0 \leq y \leq \pi$ satisfying the following conditions: (a) V is harmonic in the interior of the rectangle. (b) V has the boundary values $V(x, 0) = f(x)$ and otherwise zero. (c) V is bounded. (d) V is continuous as function of x and y everywhere where the boundary function is continuous.

Theorem II: Let $f(x, y)$ be a bounded function in $0 \leq x \leq \pi$, $0 \leq y \leq \pi$ and continuous almost everywhere. Then there exists one and only one function $V(x, y, t)$ in $D: 0 \leq x \leq \pi$, $0 \leq y \leq \pi$, $t \geq 0$ satisfying the following conditions. (a) V satisfies in the interior of D the heat equation $\partial V / \partial t = \Delta V$. (b) V has the boundary values $V(x, y, 0) = f(x, y)$ and otherwise zero. (c) V is bounded. (d) V is continuous at every continuity point of the boundary function. The proof of these theorems which may be considered as well-known is obtained by analysis of the series for the solutions constructed formally by separation of variables.

C. Loewner (Stanford, Calif.)

Re K. Boris, K.

1356. Babuška, I., Rektorys, K., and Vécichlo, F., Mathematical theory of plane elasticity [Matematická teorie rovinné pružnosti], Prague, Naklad. Českoslov. Akad. Věd, 1955, 527 pp. Kcs 39.

There is nothing more to be desired, in technical regard, than the excellent Muskhelishvili work on advanced problems of elasticity [AMR 7, Rev. 2009]. Nevertheless, every mathematician would probably like a more exact formulation of several basic theoretical facts (such as the concept of a finite and infinite plane curve, of an arc, a more detailed discussion of finite and infinite domains, both simply and multiply connected, etc). Explaining Muskhelishvili's ideas in the style usual in rigorous mathematical works is an important task for further development of this powerful technical tool with the cooperation of mathematicians.

The new Czech book under consideration is doubtless a valuable contribution to developing exact mathematical grounds for solving advanced problems of elasticity by means of analytic functions. Two-dimensional theory is not presented in the usual way as the special case of the more general three-dimensional elasticity. On the contrary, it is developed directly in the form of a system of exact definitions and theorems formulated and proved in a quite original way. Each new notion is carefully discussed, and the volume has the character of a decidedly mathematical work.

Material covered is roughly the same as in chaps. II-V of the cited Muskhelishvili book. Titles and brief characteristics of separate parts give a more detailed idea of the content: Chap. I (pp. 15-55) explains, partly by use of abstract sets, the fundamental concepts of a domain, of strain, stress, and displacement.

3

1/2

BABUŠKA, I

Chap. II (pp. 56-101) presents first of all the strain-stress relations in simply and multiply connected domains. Then comes an excellent statement of the first and second basic problems of plane elasticity in finite regions, and finally, a detailed formulation of the first fundamental problem in an infinite domain. Chap. III deals carefully (pp. 102-365) with the solution of both basic problems reduced to the Lauricella integral equation. Reader's attention is called especially to useful approximate methods for treating difficult cases whose solution cannot be given in closed form. Chap. IV (pp. 366-404) explains the use of conformal mapping methods for solving advanced problems in plane elasticity.

The last chapter constitutes a fine mathematical appendix (pp. 405-514) on necessary facts from the theory of functions and on solving integral equations. Then come references and a carefully made subject index. Paper satisfies all requirements; print is excellent.

Book emphasizes general viewpoints rather than special questions (these will be treated in a second volume). Nevertheless, it also contains many concrete problems, and much of the material probably comes from original research work of the authors. Quite original careful presentation and detailed discussion of each more complicated question make the book easily readable to engineers and physicists, despite its mathematical character.

The Czech literature in applied mathematics and mathematical physics is not rich and this book must be considered as an extraordinary phenomenon in this regard. Its reading is a real enjoyment for everyone interested in mathematics and its applications. Reviewer highly recommends this work to foreign engineers and physicists.

V. Vodička, Czechoslovakia

2/2

REKTORYS, K.

"Two theorems of the solution of the equation $\frac{\partial u}{\partial t} = \frac{\partial^2 u}{\partial x^2} + \frac{\partial^2 u}{\partial y^2}$.", P. 333.,

SBORNÍK TRANSACTIONS, Vol. 79, No. 4, Dec. 1954, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4,
No. 6, June 1955, Uncl.

REKTORZHIK,

CZECHOSLOVAKIA/Physical Chemistry - Thermodynamics,
Thermochemistry.

B.

Abs Jour : Ref Zhur - Khimiya, No 12, 1958, 38928

Author : Rektorzhih, Rybachek, Zayichuk.

Inst : _____

Title : Cryoscopic Determinations.

Orig Pub : Ceskosl. farmac., 1957, 6, No 10, 595-599

Abstract : The authors made analytical determinations of the concentration of borate and phosphate buffer solutions simultaneously with cryoscopic depressions of those solutions and calculated isotonic compositions for them.

Card 1/1

REKUBRATSKIY, V.A.

Ecologic stereotypes of reacting in some fishes of the Black Sea.
Vop. ekol. 5:186-188 '62. (MIRA 16:6)

1. Biologicheskaya stantsiya AN UkrSSR, Karadag.
(Black Sea--Fishes--Behavior)

MILANOVSKIY, Yu.Ye.; REKUBRATSKIY, V.A.

Methods of studying the shoaling behavior of fishes. Nauch.dokl.vys.
shkoly: biol.nauki no.4:77-81 '60. (MIRA 13:11)

1. Rekomendovana kafedroy ikhtiologii Moskovskogo gosudarstvennogo
universiteta im. M.V.Lomonosova.
(FISHES--BEHAVIOR)

REKUDANOV, P.N., kand.tekhn.nauk, dotsent

Parameters of cutting conditions in milling. Trudy DIIT no.26:
412-419 '58. (MIRA 11:7)
(Milling machines) (Metal cutting)

REKUDANOV, P.N., kand. tekhn. nauk

Improve the quality of manuals for technicians in the machinery industry. Mashinostroitel' no.9:47-48 S '63. (MIRA 16:10)

(Mechanical engineering—Handbooks, manuals, etc.)

REKUDANOV, P.N., kand.tekhn.nauk, dotsent.

~~no.26:420-429~~ '58. Precision of thread cut by grooved cutting tools. Trudy DIIT

(MIRA 11:7)

(Screw cutting) (Metal-cutting tools)

REKUDANOV, P.N., kand.tekhn.nauk, dotsent

Use of large feed in machining high-grade cast iron. Trudy DIIT
no.26:430-443 '58. (MIRA 11:7)
(Metal cutting)

REKUDANOV, P.N., kand.tekhn.nauk

"Manual for machine-shop foremen" by M.P. Moiseev and others.
Mashinostroitel' no.1:46-47 Ja '63. (MIRA 16:2)
(Machine-shop practice)
(Moiseev, M.P.)

REKUDANOV, P. N., Engineer

Cand Tech Sci

Dissertation: "High-Speed Milling of the Steel Parts of Locomotives."

3/5/50

Moscow Order of the Labor Red Banner Electromechanical Inst. of Railroad
Engineers

SO Vecheryaya Moskva
Sum 71

ZOBNIN, Nikolay Pavlovich, prof., doktor tekhn.nauk; YUDIN, Daniil L'vovich, dots., kand.tekhn.nauk; SHISHKIN, Aleksey Alekseyevich, dots.,kand.tekhn.nauk; ROGOV, Aleksandr Yakovlevich, dots., kand.tekhn.nauk; REKUDANOV, P.N., kand.tekhn.nauk, retsenzent; SARANTSEV, Yu.S., inzh., red.; BOBROVA, Ye.N., tekhn. red.

[Metal cutting] Obrabotka metallov rezaniem. Izd.2. Moskva, Transzheldorizdat, 1962. 299 p. (MIRA 15:6)

1. Moskovskiy institut inzhenerov zheleznodorozhnogo transporta (for Zobnin, Yudin, Rogov). 2. Rostovskiy institut inzhenerov zheleznodorozhnogo transporta (for Shishkin).
(Metal cutting)

ACCESSION NR: AT4044493

S/0000/64/000/000/0164/0171

AUTHOR: Shur'yan, I.M., Andryushchenko, V.V., Rekun, G.M.

TITLE: Characteristics of the response of the hematopoietic system during its functional recovery following radiation damage

SOURCE: Vosstanovitel'ny*ye protsessy* pri radiatsionny*kh porazheniyakh (Recovery from radiation injuries); sbornik statey. Moscow, Atomizdat, 1964, 164-171

TOPIC TAGS: radiation sickness, hematopoiesis, bone marrow, leukopenia

ABSTRACT: The effect of radiation on hematopoiesis was studied in 60 male chinchilla rabbits 4, 8, 12, 16, 20, 24, and 30 days after irradiation (either p^{32} as Na_2HPO_4 , 1.5 mc/kg i.p., or x-ray, 860 r). Both these doses caused the death of 50% within 30 days. In some animals which survived the acute radiation sickness, the blood picture was studied 2, 3, 6 and 12 months after irradiation. After injection of p^{32} , the peripheral blood picture began to recover within 20 days. The process was slow, however, and the majority of peripheral blood indices only returned to normal after half a year. Within a year, the peripheral blood picture did not differ from the original values. In the bone marrow, signs of hematopoiesis were noted 20 days after irradiation with p^{32} .

Card 1/3

ACCESSION NR: AT4044493

After 3-6 months the recovery of bone marrow activity was still incomplete. Within a year, however, the bone marrow in the 4 surviving animals was close to normal, as determined by the number of blood-forming elements and the myelogram. After x-irradiation, recovery already began in the peripheral blood 8 days later. Within a month most of the values were almost normal, and three months after irradiation the values were all normal. In the bone marrow the recovery process started 8-12 days after irradiation, and within 3 months all the values were almost identical to those in the preradiation period. It should be noted that out of the 14 animals which survived the acute radiation sickness caused by external irradiation (x-ray), only 2 died during the year, while only 4 out of 14 animals irradiated with p32 survived for the same time. In another set of experiments, electronmicroscopic investigations were made on the effect of x-ray (500 r) on the bone marrow of rats. One hour after irradiation, many broken cells appeared. In individual cells degenerative forms of mitochondria were observed. Within 24 hours, there were increased numbers of plasma and reticular cells, along with degenerative changes in the nucleus and cytoplasmic organelles of many of the hematopoietic elements. Within three days the number of

Card 2/3

ACCESSION NR: AT4044493

abnormal cells was increased with the appearance of degenerative changes in all parts of the bone marrow, and on the fifth day there was a complete disappearance of normal cells. Within 2 weeks, signs of the recovery of hematopoiesis were observed, with the appearance of young forms. By the 24th day this activity was quite pronounced. Plasma cells increased after irradiation, but after 24 hours there were still no changes in the ultrastructure of the plasma cells. Within three days, however, degenerative changes appeared in the cells, becoming more pronounced after five days. After three weeks, when the degeneration in the bone marrow had become less marked, the plasma cells were still abnormal. "Post-mortem studies were carried out at the Laboratoriya morfologii Instituta fiziologii AN USSR (Morphology Laboratory of the Physiological Institute, AN Ukr SSR) under the direction of Prof. A.I. Smirnova-Zamkova. Orig. art. has: 3 figures.

ASSOCIATION: none

SUBMITTED: 29Jan64

NO REF SOV: 000

ENCL: 00

SUB CODE: LS

OTHER: 000

Card 3/3

REKUNOV, F.M.

Road construction in Gorkiy Province. Avt.dor. 23 no.11:5-7
N'60. (MIRA 13:11)

1. Nachal'nik Obldorupravleniya.
(Gorkiy Province--Road construction)

REKUNOV, N.A.; MIKHAYLOV, A.D.; DOMOKUROV, I.A.; NAZMUTDINOV, R.Sh.; IGUSHKIN,
I.A.

SKS-8-59K seismic velocity logging station. Geofiz. razved. no.3:104-
109 '61. (MIRA 17:2)

REKUNOV, N.A.

Universal device for using the sheet film pack of an OS-60 oscillograph with any width photographic paper. Geofiz. razved. no.3:110.
111 '61. (MIRA 17:2)

VOLKOV, V.T.; DUDKO, A.A.; LEBEDEV, V.P.; LIPGART, B.K.; MIKHAYLOV, B.V.,
kand.tekhn.nauk; MIKHAYLOV, V.A., kand.tekhn.nauk; REKUNOV, V.F.;
SAVEL'YEV, N.P.; SOROKIN, V.V.; KHARIN, A.I. kand.tekhn.nauk;
Prinimali uchastiye: IVANOV, N.A., kand.tekhn.nauk;
INOKOVA, O.L.; GOMOZOVA, N.A., red.; NAUMOVA, G.D., tekhn.red.

[Mechanization and automation in the rock products industry]
Mekhanizatsiia i avtomatizatsiia v promyshlennosti nerudnykh
stroitel'nykh materialov. [By] V.T.Volkov i dr. Moskva,
Gosstroizdat, 1963. 353 p. (MIRA 17:3)

CHEPNIKH, D.G., inzh.; REKUNOV, Yu.Ya., inzh.

Effect of specific components on the abrasive wear of
iron-aluminum alloys. Mashinostroyeniye no. 5236 3-5 '64
(MIRA 18:2)

REKUNOV, Yu.Ya.

Heating steel casting risers with exothermic mixtures. Mashinostroenie
no.2:112-113 Mr-Ap '62. (MIRA 15:4)
(Steel castings)

L 12434-65 EWT(m)/EWP(w)/EPR/EWA(d)/EWF(t)/EWP(b) Ps-4 AFTO(p) JD/WB
 s/0304/64/000/005/0036/0036

ACCESSION NR: AP4047693

AUTHORS: Cherny*kh, O. G. (Engineer); Rekurov, Yu. Ya. (Engineer)

TITLE: Influence of different components on the abrasion resistance of iron-aluminum alloys

SOURCE: Mashinostroyeniye, no. 5, 1964, 36

TOPIC TAGS: aluminum alloy, iron alloy, manganese alloy

ABSTRACT: In order to determine the influence of different components on the abrasion resistance of aluminum-iron alloys at high temperatures, sample alloys in which the Al, Cr, and Si contents were varied over a wide range were subjected to abrasion tests. Results of the experiments showed that: increasing the Al content from 6.63-19.6% sharply increases the abrasion resistance; in Al-Mn alloys in which the Mn content was changed from 0.47-7.62% and the C content from 0.26-0.84% it was found that the alloy with 3.2% Mn, 1.28% Si, 22.8% Al, and 0.75% C had the best corrosion resistance; in changing the Cr content from 0.29-6.28% with 24% Al and 1.4-1.9% Si it was found that increasing the Cr content above 1.34% had very little effect on the abrasion resistance; in changing the Si content from 2.86-8.17% (Al ≈ 24%) the abrasion resistance increased but at high Si concentrations the metal was discolored.

Card 1/2

L 12434-65

ACCESSION NR: AF4047693

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: MM

NO REF SOV: 000

OTHER: 000

Card 2/2

GORDASH, Yu.T.; SERGIYENKO, S.R.; SEMYACHKO, R.Ya.; REKUNOVA, E.A.

Chemical nature of the macromolecular hydrocarbon portion of
Mukhanova petroleum. Dokl. AN BSSR 5 no.3:112-117 Mr '61.
(MIRA 14:3)

1. Institut fiziko-organicheskoy khimii AN BSSR. Predstavleno
adademikom AN BSSR B.V. Yerofeyevym.
(Mukhanova region--Petroleum--Analysis)

CHERCHES, Kh.A.; BARDYSHEV, I.I.; REKUNOVA, E.A.

Chemical composition of ethereal oil from common pine (*Pinus silvestris*). Zhur.prikl.khim. 35 no.1:209-212 Ja '62. (MIRA 15:1)

1. Institut fiziko-organicheskoy khimii AN BSSR.
(Essences and essential oils)

LARYUKHIN, M.A.; REKUNOV, V.S.; SKULINA, K.I.; MIKHINA, L.K.

Use of a fine chemical spray from an airplane in controlling tick-borne encephalitis carriers in the Anzhero-Sudzhensk District in 1957-1959. Med.paraz.i paraz.bol. no.3:347-351 '62. (MIRA 15:9)

1. Iz otdela entomo-toksikologii i dezinsektzii (zav. - prof. V.A. Nabokov) Instituta meditsinskoy parazitologii i tropicheskoy meditsiny imeni Ye.N. Martsinovskogo (dir. - prof. P.G. Sergiyev) Ministerstva zdravookhraneniya SSSR, Gosudarstvennogo Nauchno-issledovatel'skogo instituta grazhdanskogo vozdušnogo flota (nach. - general leytenant N.A. Zakharov) i Anzhero-Sudzhenskoy gorodskoy sanitarno-epidemiologicheskoy stantsii.

(ENCEPHALITIS) (AERONAUTICS IN INSECT CONTROL)

(ANZHERO-SUDZHENSK DISTRICT--TICKS AS CARRIERS OF DISEASE)

REKUNOVA, N.

They care about everything. NTO 5 no.10:37-38 0 '63. (MIRA 17:1)

1. Chlen Vsesoyuznogo khimicheskogo obshchestva im. Mendeleyeva, nachal'nik byuro po ratsionalizatsii i izobretatel'stvu Lisichanskogo khimicheskogo kombinata.

1. REKUS, G. A.
2. USSR (600)
4. Windbreaks, Shelterbelts, Etc. - Azov District
7. Shelterbelt afforestation on the "Bolshevik" Collective farm. Les 1 step' 14
No. 11, 1952.

9. Monthly List of Russian Accessions. Library of Congress, February 1953. Unclassified.

TOLOKNOV, O.A., kand.tekhn.nauk; NITUSOV, Yu.Ye., kand.tekhn.nauk; REKUS,
G.G., kand.tekhn.nauk; CHIRKOV, M.T., inzh.

An a.c.drive system for driving wheels of an automobile train.
Izv.vys.ucheb.zav.; mashinostr. no.7:133-136 '63. (MIRA 16:11)

1. Moskovskoye vyssheye tekhnicheskoye uchilishche imeni Baumana.

TOLOKNOV, O.A., kand. tekhn. nauk; REKUS, G.G., kand. tekhn. nauk;
CHIRKOV, M.T., inzh.

Gas-turbine a.c. traction drive system. Elektrotehnika 34
no.11:44-49 N '63. (MIRA 17:2)

REKUS, G.G., kand. tekhn. nauk

Heating of asynchronous motors in single-phase condenser
operation. Elektrotehnika 35 no.1:45-48 Ja '64.
(MIRA 17:2)

ACC NR: AP000011

CLASS CODE: UR/0146/65/C08/005/0006/0071

AUTHOR: Anichin,

ORG: Moscow Institute of Electronics and Telemechanics (Moskovskiy institut avtomatiki i telemekhaniki)

TITLE: Principles of designing joint internal and external storage 160

SOURCE: IVUZ. Priroostroyeniye, v. 8, no. 5, 1965, 68-71

TOPIC TAGS: magnetic core storage, computer storage

ABSTRACT: A few circuits of joint internal and external (long-term) storage are reviewed. They promise substantial savings on the size and weight of the equipment; the address register, decoder, read-current shaper, read-signal amplifier, and (in some cases) the output register may be made common to both storages. The circuits are particularly suitable for special-purpose and control computers. An additional write winding, common to all digits, but passing through some cores ("1") and bypassing others ("0") is provided in the two-cores-per-bit and matrix-type storages. Also the use of the common read winding is considered. Orig. art. has: 3 figures and 2 formulas.

SUB CODE: 09 / SUBM DATE: 04Dec64

Card 1/1

UDC: 681.142.65

L 54679-65 EWT(1)/EPA(s)-2

ACCESSION NR: AP5019063

UR/0143/65/000/003/0039/0047
621.313.333.017

AUTHOR: Rekus, G. G. (Candidate of technical sciences); Chirkov, M. T.
(Engineer)

TITLE: Effect of harmonics on the heating of an induction motor

SOURCE: IVUZ. Energetika, no. 3, 1965, 39-47

TOPIC TAGS: induction motor, induction motor heating, voltage harmonic

ABSTRACT: A nonsinusoidal voltage applied to an induction motor is expanded into the Fourier series, and the effect of each harmonic on the machine with an integer number of slots per pole per phase is considered. The nonsinusoidal supply voltage greatly intensifies the harmonics of the magnetizing force in the machine magnetic circuit which, in turn, results in higher losses and a higher braking torque. Formulas for harmonic-caused additional losses in the core and teeth, the losses due to tooth pulsations, etc., are developed. Their use is

Card 1/2

L 54679-65

ACCESSION NR: AP5010063

illustrated by examples of AS84-4 and AOS42-2 induction motors operating on a single-phase distorted-voltage electric locomotive. With the highest permissible voltage distortion (21% of the 3rd, 8% of the 5th, 8.6% of the 7th, 8.5% of the 9th, 18% of the 11th, 13% of the 13th harmonic, etc.), the additional temperature rise due to the harmonics was only 1-2C. Orig. art. has: 3 figures and 25 formulas.

ASSOCIATION: MVTU im. Baumana (Moscow School of Higher Technical Learning)

SUBMITTED: 16Dec63

ENCL: 00

SUB CODE: EE

NO REF SOV: 008

OTHER: 000

Card *12*
2/2

ANDERSEN, N.C.; DEKUS, G.G.

Principles for the combination of operational and long-duration
memory devices. Izv. vyzn. uchreb. zav.; prib. 8 no.5:68-71 '65.
(MIRA 12:10)

1. Moskovskiy institut avtomatiki i telemekhaniki. Rekomendovana
kafedroy avtomatiki.

BEKUS, Nikolay Gavrilovich, kand. tekhn. nauk, dokt. inzh.; VEREMIIY, Nikolay
Nikolayevich; CHIRKOV, Mikhail Tikhonovich

Limits of regulation and selection of the power of a synchronous
generator with frequency control. Izv. vys. ucheb. zav.; elektromekh.
7 no. 11:1343-1349 '64. (MIRA 18:3)

1. Kafedra elektrotekhniki i elektroniki Moskovskogo khimiko-
tekhnologicheskogo instituta imeni Mendeleeva (for Bekus).
2. Zamestitel' direktora Vsesoyuznogo nauchno-issledovatel'skogo
instituta po avtomatizirovannomu elektroprivodu (for Veremiy).
3. Vedushchiy inzhener Vsesoyuznogo nauchno-issledovatel'skogo
instituta po avtomatizirovannomu elektroprivodu (for Chirkov).

REKUS, G.G., kand.tekhn.nauk; BELOUSOV, A.I., inzh.

Selection of asynchronous motors for sinking pumps. Prom. energ.
20 no.3:31-34 Mr '65. (MIRA 18:6)

REKUS, G.G., kand. tekhn. nauk (Moskva); BELOUSOV, A.I., inzh. (Moskva)

Heating of the asynchronous motors of sinking pumps. Elektrichestvo
no.3:62-66 Mr '65. (MIRA 18:6)

REKUS, G.G., assistant

Selecting starting resistance and calculating starting characteristics
of a single-phase asynchronous motor. ~~1~~sv.vys.ucheb.zav.;
mashinostr. no.4:141-146 '61. (MIRA 14:6)

1. Moskovskoye vyssheye tekhnicheskoye uchilishche imeni Baumana.
(Electric motors, Induction)

REKUS, G.G., assistant

Calculating electromechanical characteristics of an asynchronous capacitor motor. Izv. vys. ucheb. zav.; mashinostr. no.3:137-144 '61. (MIRA 14:5)

1. Moskovskoye vyssheye tekhnicheskoye uchilishche imeni Baumana. (Electric motors, Induction)

REKUS, G.G., assistant

Calculating electromechanical characteristics of capacitor-start
motors. Izv.vys.ucheb.zav.; mashinostr. no.11:106-117 '61.
(MIRA 14:12)

1. Moskovskoye vyssheye tekhnicheskoye uchilishche im. N.E.
Baumana.

(Electric motors)

REKUS, G.G., kand.tekhn.nauk

Choice of the power rating of three-phase asynchronous motors with
single-phase feed. Prom. energ. 18 no.8:42-44 Ag '63.

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(Electric motors, Induction)

REKUS, G.G., kand. tekhn. nauk; CHIRKOV, M.T., inzh.

Effect of harmonics on the torque curve of an asynchronous motor. Izv. vys. ucheb. zav.; energ. 7 no.11:3-8 N '64
(MIRA 18:1)

1. Vyssheye tekhnicheskoye uchilishche imeni Baumana. Predstavlena kafedroy elektrotekhniki i elektrooborudovaniya.

L 31972-65 EWT(1)/EPA(s)-2/EWA(h) Pz-6/Peб TT/AT
 S/0144/64/000/011/1343/1349
 ACCESSION NR: AF5008594
 AUTHOR: Rekus, G. G.; Chirkov, M. T.; Veremiy, A. N.
 TITLE: Regulation range and power rating selection for a synchronous generator
 with frequency control
 SOURCE: IVUZ. Elektromekhanika, no. 11, 1964, 1343-1349
 TOPIC TAGS: gas turbine engine, electric generator, electric motor
 Abstract: The electric gas-turbine drive employing a synchronous generator and an induction motor will find broad use wherever a steady-power drive is needed. This raises the problem of selecting the proper power rating of the synchronous generator in order to ensure the operation of the induction motor within the limits of regulation of the frequency of the generator at which the rise in the temperature of the armature winding does not exceed the normal operating limits. Formulas for determining the desirable power rating and voltage range are derived. Orig. art. has 2 figs. 28 formulas.
 ASSOCIATION: none
 Card 1/2